



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/814,984

03/31/2004

Edward Allen Taylor

73022

8182

27975 7590 01/27/2005

ALLEN, DYER, DOPPELT, MILBRATH & GILCHRIST P.A.
1401 CITRUS CENTER 255 SOUTH ORANGE AVENUE
P.O. BOX 3791
ORLANDO, FL 32802-3791

EXAMINER

LE, THANH TAM T

ART UNIT

PAPER NUMBER

2839

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/814,984

Applicant(s)

TAYLOR, EDWARD ALLEN

Examiner

Thanh-Tam T. Le

Art Unit

2839

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/31/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's submitted Prior Art (APA) in view of Shindo et al. (5,025,347).

Regarding claims 1 and 15, APA, figure 1, discloses an article of manufacture comprising:

- an outer metallic shell (10) having an aperture therethrough sized to receive a conductor pin-retaining metallic insert (20);
- at least one aperture (22) extending through the metallic insert and containing at least one conductor pin (24) hermetically sealed therewith by a dielectric material (26) formed between the at least one conductor pin and a sidewall of the at least one aperture; and
- a hermetic bond joint (30).

APA discloses the instant claimed invention as described above except for the conductor pin-retaining metallic insert comprising a first metal and a second metal which a first coefficient of thermal expansion different with a second coefficient of thermal expansion, respectively.

Shindo et al., figures 1 and 2, disclose a semiconductor device having a first

Art Unit: 2839

metal system (1) and a second metal system (5) which having different coefficient of thermal expansion (column 3, lines 25-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide APA with two metal system which having different coefficient of thermal expansion, as taught by Shindo et al., in order to endure a temperature cycle test.

Regarding claims 2 and 3, APA discloses the hermetic bond joint comprising a solder joint and weld joint.

Regarding claim 4, it is noted that Shindo et al. disclose the second coefficient of thermal expansion is proximate to the coefficient of thermal expansion of the outer metallic shell.

Regarding claim 5, it is noted that Shinto et al. disclose the second coefficient of thermal expansion is higher than the first coefficient of thermal expansion.

Regarding claims 8, 10 and 18-19, it is noted that Shindo et al. disclose the first metal comprising stainless steel (column 3, lines 26-27).

Regarding claims 11, 12 and 20-21, APA discloses the dielectric material comprising at least one of a glass, having a process temperature below the melting point of the second metal.

Regarding claim 13, APA discloses the at least one aperture comprising a plurality of apertures extending through the metallic insert and containing respective ones of a plurality of conductor pins hermetically sealed therewith by the dielectric material formed between the conductor pins and sidewalls of the plurality of apertures.

Regarding claims 14 and 22, the outer metallic shell and a package wall are formed as an integrated structure.

Regarding claim 6, APA and Shindo et al. disclose the instant claimed invention as described above except for the second coefficient of thermal expansion is lower than the first coefficient of thermal expansion.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide APA and Shindo et al. to have the second coefficient of thermal expansion is lower than the first coefficient of thermal expansion, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Leshin, 105 USPQ 233, in order to control the temperature.

Regarding claims 7, 9 and 16-17, APA and Shindo et al. disclose the instant claimed invention as described above except for the outer metallic shell and the second metal comprising titanium or a metal that having a coefficient of thermal expansion compatible therewith.

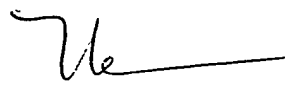
It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the outer metallic shell and the second metal comprising titanium or a metal that having a coefficient of thermal expansion compatible therewith, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as an matter of obvious design choice. In re Leshin, 125 USPQ 416, in order have a better connection.

Regarding claims 23-31, the features in the method claims are identical to those in the apparatus claims. Therefore, the method of forming a multipin connector of hermetically sealing a plurality of connector pins alone are not a patentable feature.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh-Tam T. Le whose telephone number is 571-272-2094. The examiner can normally be reached on 7:30-5:00.
4. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TC Patel can be reached on 571-272-2098. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
5. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TL
01/24/05.



T. Le